**Average annual & monthly maximum, minimum, & mean temperature**

[About temperature maps](http://www.bom.gov.au/jsp/ncc/climate_averages/temperature/IDCtempgrids.jsp)

References & Guides

* [Additional climate products](http://www.bom.gov.au/climate/data-services/index.shtml)
* [Climate Data Online](http://www.bom.gov.au/climate/data/index.shtml)
* [Climate data FAQ](http://www.bom.gov.au/climate/how/faq-data.shtml)
* [Climate education](http://www.bom.gov.au/lam/climate/index.htm)

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**At a glance**

These temperature maps show the average annual and average monthly distributions of maximum, minimum and mean temperature.

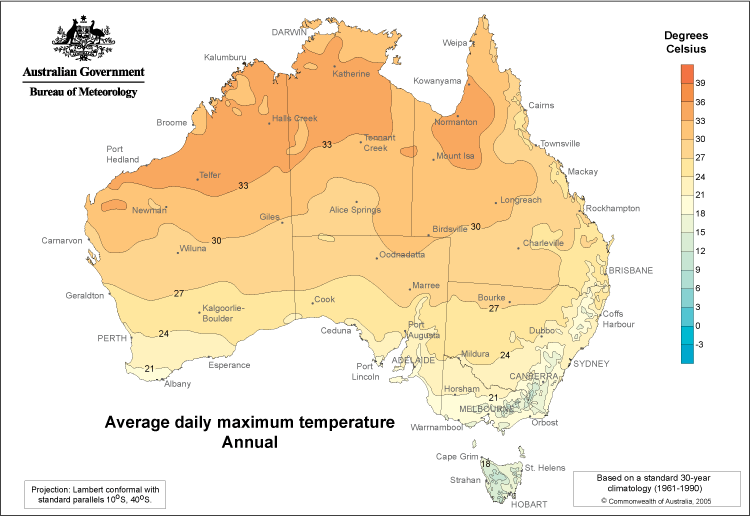
**View the maps**

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Controls

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Map | Maximum temperature | Minimum temperature | Mean temperature | Current view Australia |
| Period |  | No period available for the selected map [Following](javascript:donothing();) |  |
|  | Download:   [Grid](http://www.bom.gov.au/web01/ncc/www/climatology/temperature/mxt/mxtan.zip) |  |  |

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Product Code:   IDCJCM0005

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**What do the maps show?**

These maps show the average annual and average monthly maximum, minimum and mean temperatures over the period 1961 to 1990.

The most significant factor in determining the general pattern of temperature distribution across Australia is proximity to the equator. Evident in all the temperature maps (maximum, minimum and mean) is that areas to the north of the country are warmer than areas to the south. This is due to the location of the continent with respect to the equator.

The annual maximum temperature map shows that the effect of topography is also significant, with higher areas showing cooler temperatures. The higher parts of the Great Dividing Range in southeastern Australia are cold enough to maintain snow fields during most winters. The effect of topography is also shown in the annual minimum temperature map, but it is not as pronounced. This is because during the night, cold air tends to sink to the surface, leaving warmer air above it (this is called an inversion). Inversions are common over much of Australia during the cooler months. The strength of the inversion, and its interaction with local topography, affects the way minimum temperature is displayed on a broad scale map.

Proximity to water bodies can also lead to a substantial modification of local climate. Coastal areas are well known for their cooling afternoon seabreezes in summer, and milder nights in winter. In contrast, inland areas will have colder temperatures at night due to their distance from the sea (which acts as a "heat source" overnight), the lower levels of cloudiness and humidity, and generally lighter wind speeds (which maximises heat lost from the lower layers of the atmosphere).

**How are the values calculated?**

Average annual temperatures (maximum, minimum or mean) are calculated by adding daily temperature values each year, dividing by the number of days in that year to get an average for that particular year. The average values for each year in a specified period (1961 to 1990) are added together and the final value is calculated by dividing by the number of years in the period (30 years in this case). Similarly, average monthly temperatures are calculated by adding monthly temperature averages (from daily data) and dividing by the number of years in the specified period. Mean temperatures are calculated by adding the daily maximum temperature and the daily minimum temperature, and dividing by two.